

IN THE SPECIFICATION

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Please replace the paragraph beginning at line 6, page 20 with the following rewritten paragraph:

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Next, in step 314, a determination is made whether the branch instruction is at an address that is a multiple of four ($4*n$, for some n). If yes, the process proceeds to step 318 to generate the branch instruction, and then the process returns to step 310. However, if the answer is NO in step 314, the process proceeds to step 315 to determine if the branch instruction can be reordered with neighboring instructions (before or after it) so that the branch can be placed at an address that is a multiple of 4. If not, the process proceeds to step 317 to generate an appropriate number of NOP (No Operation), which is an instruction that has no impact on the machine, that is, it does not change the architected state of the machine[.] instructions (between 1 to 3) so that the branch instruction can be generated at an address that is a multiple of 4. The process then returns to step 310. However, if the answer is YES in step 315, the process proceeds to step 316 to reorder the neighboring instructions and place the branch instruction at an address that is a multiple of 4. If the process is at an address, for example $4*n+1$, then the process needs to put three more instructions before it reaches an address that is a multiple of four. If the branch instruction is the next instruction that is being generated and it cannot be reordered with some other instructions that are also being generated at this time (maybe because there is data dependency), then the process places three NOP instructions and reaches the address that is a multiple of four and places the branch instruction. The process then returns to step 310.
